

# setra®

## POWER PATROL



### what's inside?

- Understanding your Energy Management Needs
- Why Rogowski Coils?
- Power Patrol vs. the Competition
- About the Power Patrol

**SAVE MONEY - SAVE TIME - SIMPLIFY YOUR JOB**

## UNDERSTANDING YOUR APPLICATION REQUIREMENTS

The first rule in implementing any energy management program is to define the objectives based on the application. Whether tasked with reducing the energy consumption of a hospital, properly allocating costs across a university campus or enrolling an industrial plant in a utility demand response (DR) program, the goal of the program must define the objectives. Products like the Power Patrol give access to detailed consumption data which provides a facility manager or owner the tools necessary to view baselines, set goal targets and verify the results. Designed with the versatility to meet the demands of the most stringent applications, the Power Patrol combines industry leading performance with unmatched configurability and ease of installation.



## PERFORMANCE & VERSATILITY FOR ANY APPLICATION

### Revenue Grade Metering

Accuracy is paramount in revenue grade applications - and the Power Patrol delivers. The Power Patrol meets the **ANSI 12.2 standard** and is a **revenue grade** meter. The Power Patrol can transmit data seamlessly through a Building Automation System (BAS) or Building Energy Management System (BEMS) to manage your revenue grade needs:

- **Tenant Billing**
- **Demand Response**
- **Net-Metering (Renewable Energy)**
- **Utility Energy Billing**



### Energy Management Metering

Selecting a meter for non-revenue grade applications; the customer requires a nice balance of reliability, performance, versatility and ease of installation at an attractive price point. Luckily - the Power Patrol satisfies this requirement too. Simply attach the Power Patrol to your PC via **USB cable** and using Setra's HeadStart software select type of CT's (**Patrol Flex or Split Core**), communication protocol (**BACnet/Modbus through Ethernet/Serial**), supply voltage and you are done in minutes! To eliminate complicated part numbering schemes, our industry first USB configuration enables the user to utilize 1 model rather than building up to 50+ part numbers with competitive products.

- **Green Building (LEED / Energy Star)**
- **Measurement & Verification**
- **Equipment Efficiency Tracking**
- **Cost Allocation**

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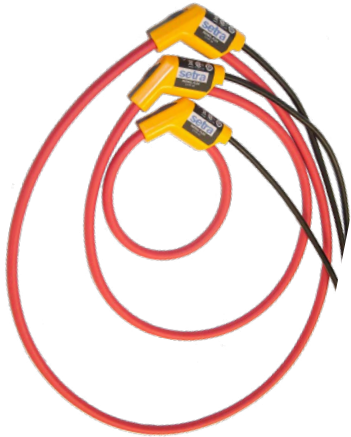
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# Why would you use a Split-Core CT ever again?

## Patrol Flex Rogowski Coil CT



**Range:** 5-5000+  
**Weight:** <.27 lbs.  
**Accuracy:** ±1% (including meter)

**VS.**

## Standard Split-Core CT



**Range:** 0-3400  
**Weight:** 8.4 lbs.  
**Accuracy:** ±1% (CT only)

**Range:** 0-400  
**Weight:** 3.6 lbs.  
**Accuracy:** ±1% (CT only)

The Patrol Flex is the most accurate and highest performance Rogowski Coil in submetering. Offered in 12", 24" and 36" lengths (diameter), the Rogowski Coils offer significant installation advantages over split-core CT's because of its light weight, wide current range (5-5000+ Amps), mechanical flexibility for mounting in tight quarters and its easy placement around cable bundles or large bus bars.

- **Size is not dependent on current range**
  - 12", 24" and 36" all 5-5000 A
- **Position sensitivity <.2% error**
  - Up to 5x better than competition
- **Limited External Voltage influence**
  - Up to 15x better than competition



Split-Core CT's are not designed to adapt to the unforgivable dimensions of a Busbar.



Don't be unprepared next time the cable bundle is too thick for the aperture in your CT.

**The decision is easy, you wouldn't.**

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## Why Choose the Setra Power Patrol over the competition?

With a variety of submeters available on the market, it can be difficult to know which meter is right for your application. Check out the Power Patrol versus two of the leading meter manufacturers and see how it stacks up. If you value maximum versatility without sacrificing performance, then the Power Patrol is the right solution for you.

		Setra Power Patrol 	Competitor A Leading DINrail Meter 	Competitor B Leading Panel Meter 	
Hardware	Rogowski Coil Compatible	✓	✓	✗	The Setra Patrol Flex is the <b>highest performance Rogowski Coil in the industry</b> ; offering better than 1% accuracy when connected to the Power Patrol
	Field Selectable Rogowski Coil/ Standard CT	✓	✗	✗	Flexibility to <b>switch between Rogowski Coil and CT on the job</b> ; never get caught with the wrong hardware
	Broadband Power Supply	✓	✓	✗	Every Power Patrol model has the ability to be <b>powered off of 80-600 VAC</b> ; no need to manage different models
Communication Protocols	Ethernet	✓	✗	✓	Ethernet connectivity allows the Power Patrol to communicate quickly over <b>BACnet IP or Modbus TCP</b>
	4-in-1	✓	✗	✗	The Power Patrol comes loaded with BACnet IP/Modbus TCP (ethernet) and BACnet MSTP/Modbus RTU (RS-485) offering the <b>greatest field flexibility available today</b>
Meter Config.	USB	✓	✗	✗	Avoid being forced to configure the meter in a live enclosure - the Power Patrol is <b>powered and configured through a simple USB to PC connection</b>
Meter Accuracy	ANSI 12.2	✓	✓	✓	Meets ANSI 12.2 Standards for <b>Revenue Grade Requirements</b>

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## POWER PATROL

The **Setra Power Patrol** is every electrical contractor's dream. The networked 3-phase power meter works with a small enough form factor to be mounted inside or outside of the panel using either mounting tabs or the DINrail clip.

### Rogowski and CT Compatible

The Power Patrol works with either Rogowski Coil "flex" CTs or conventional split-core CTs. The ability to have interchangeable CTs gives added flexibility for last minute changes at the job site. The Power Patrol is embedded with the necessary amplifier/integrator circuitry for Rogowski coil CTs—eliminating the need to provide external power.

### Easy USB Configuration

Using the Power Patrol HeadStart software, power and configure the meter through your computer's USB port. While other meter's require configuration in a live enclosure, the Power Patrol can be easily configured outside of the panel, eliminating the risk of arc flash. HeadStart can save meter settings, allowing the installer to clone meter profiles quickly and easily.

### Field Selectable Communications (4-in-1)

Each Power Patrol comes with a field selectable Modbus or BACnet communication. Communications interface to the Power Patrol is through either an RS-485 serial connection (BACnet MS/TP / Modbus) or over Ethernet (BACnet IP / Modbus TCP).

### Line Powered from 80-600V

The Power Patrol series instruments are line-powered and do not require external power. Its power supply can accommodate service voltages ranging from 80-600V (phase-to-phase). The Power Patrol has 3 LED indicators (Red/Green) which confirm proper CT-to-phase installation.



### Power Patrol Features:

- Configure & Power Through USB
- Rogowski Coil and Split Core CT Compatible
- Field Selectable BACnet/Modbus (4-in-1)
- Broadband Power Supply (80-600V)
- Optional Display for Setup and Monitoring
- ANSI C12.20-2010 Class 0.2
- Bi-Directional
- DIN- Mount

### Applications:

- Measurement & Verification
- Demand Response
- Energy Cost Allocation
- Equipment Efficiency Tracking
- Preventive Maintenance
- Tenant Sub-Metering
- Net Metering

**5 Year Warranty**

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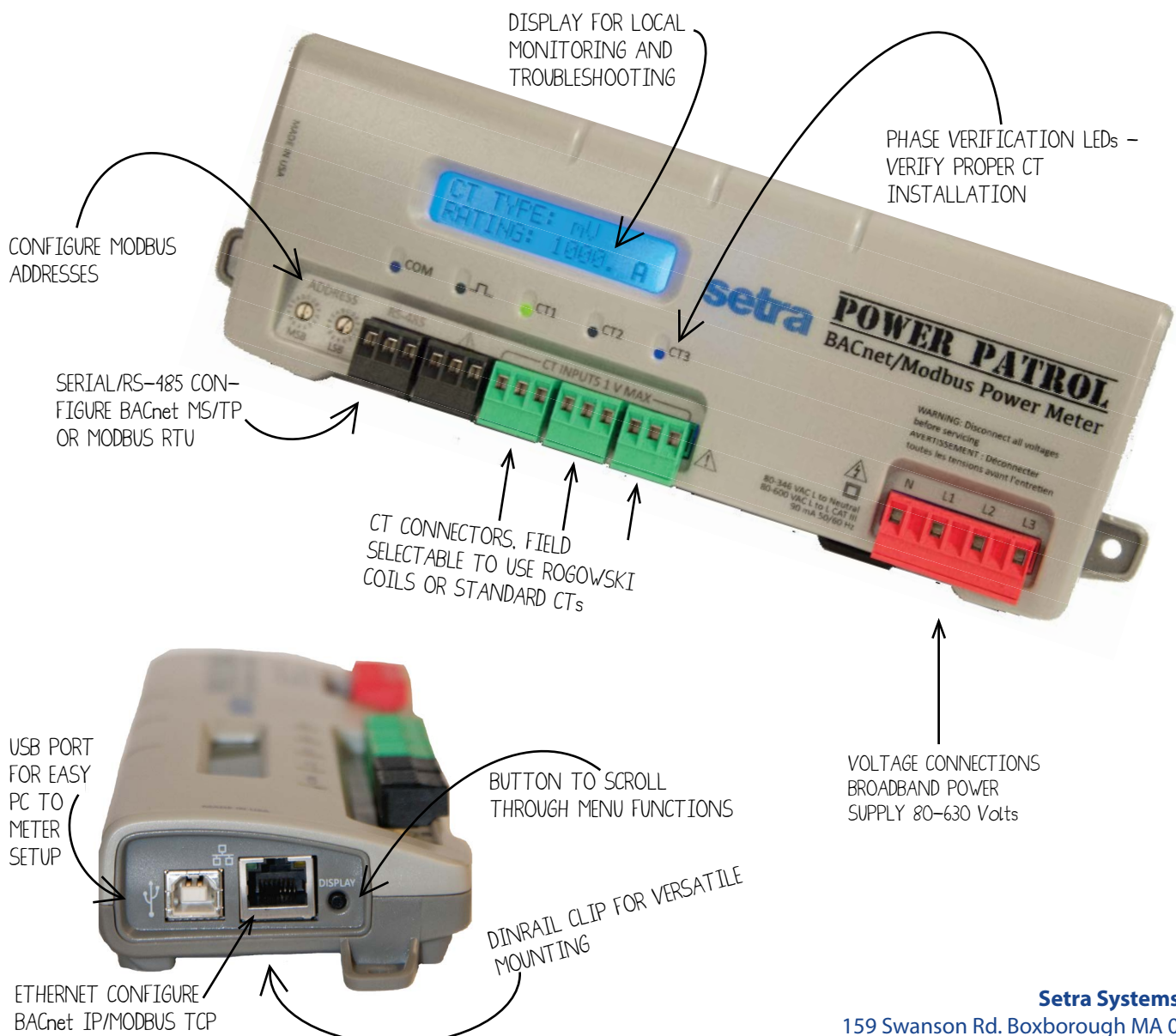
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## Modbus Register/BACnet Object Descriptions

(Partial List: Over 100 parameters available. Go to [www.setra.com](http://www.setra.com) for full list and objects sheets.)

System True Energy (kWh)	Individual Phase to Phase Voltages
Instantaneous Total True Power (kW)	Line Frequency (Hz)
Peak Demand (Adjustable Window) (kW)	Individual Phases True Energy (kWh)
Maximum Instantaneous Power (kW)	Individual Phases True Power (kW)
System Reactive Energy (kVARh)	Individual Phases Reactive Energy (kVARh)
System Apparent Energy (kVAh)	Individual Phases Reactive Power (kVAR)
System Apparent Power (kVA)	Individual Phases Apparent Energy (kVAh)
System Displacement Power Factor (dPF)	Individual Phases Apparent Power (kVA)
System Apparent Power Factor (aPF)	Individual Phases Apparent Power Factor (aPF)
Average Current (Amps)	Individual Phases Displacement Power Factor (dPF)
Average Line to Line Voltage (Volts)	Individual Phases Current (Amps)
Average Line to Neutral Voltage (Volts)	Individual Phases Line to Neutral Voltages (Volts)
Multiple Meters External Data Synchronization	Individual Phases Line to Line Voltages (Volts)



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